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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/525,258 | 02/22/2005 | Gordon Alastair Bell | PPD 70111 | 5001 |

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SYNGENTA CROP PROTECTION, INC.
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| EXAMINER |
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BROOKS, KRISTIE LATRICE

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| ART UNIT | PAPER NUMBER |
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1616

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| NOTIFICATION DATE | DELIVERY MODE |
|-------------------|---------------|

12/16/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

department-gso.patent@syngenta.com

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/525,258 | Applicant(s) BELL, GORDON ALASTAIR | |
| | Examiner KRISTIE L. BROOKS | Art Unit 1616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 3, 2009 has been entered.

Status of Application

2. Claims 1 and 4-13 are pending.
3. Receipt and consideration of Applicants remarks filed on August 3, 2009 is acknowledged.
4. Rejections not reiterated from the previous Office Action are hereby withdrawn. The following rejections are either reiterated or newly applied. They constitute the complete set of rejections presently being applied to the instant application.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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6. Claims 1 and 4-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "wherein said adjuvant has little or no surfactant properties." It is unclear as to what Applicant has intended by the phrase "little or no surfactant properties". The specification does not provide a definition for "little or no surfactant properties". Therefore, a skilled artisan would not know the metes and bounds of the claims.

Claims 4-13 are rejected to for being dependent on a rejected claim.

Claim Rejections - 35 USC § 103

7. Claims 1 and 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mueninghoff et al. (US 6,156,705), in view of Waltersdorfer et al. (US 5,139,785) , Scher et al. (US 5,332,584).

Applicant claims a microencapsulated agrochemical composition comprising an aqueous dispersion of microcapsules having material encapsulated therein wherein the material encapsulated within the microcapsules comprises (a) an agrochemical (b) a water-insoluble, bioperformance-enhancing adjuvant of formula (I) and (c) a water-immiscible solvent in which both the agrochemical and adjuvant are soluble.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Mueninghoff et al. teach pesticidal formulations comprising pesticides (i.e. herbicides (e.g. alachlor), insecticides, fungicides (e.g. dithiocarbamate), insect repellants, etc.) and an adjuvant composition comprising a fatty alcohol polyalkoxy alkyl ether of formula (I) and a cosurfactant/solvent such as, ethoxylated fatty amines, methyl oleate, silicone surfactants, etc. (see the abstract and column 1 lines 60-67, column 2 lines 1-7, and columns 3-5 (lipophilic pesticide agents)). The pesticidal composition contains from 99 to 15 % by weight of the adjuvant and 0.1 to 95% of an active ingredient (see column 5 lines 44-52).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Mueninghoff et al. teach that the instantly claimed components but do not teach the composition in the form of microcapsules. Further, Mueninghoff et al. do not teach the microcapsules having a diameter of less than 2 microns and polymer wall concentration of less than 3% by weight. These deficiencies are cured by the teachings of Waltersdorfer and Scher et al.

Waltersdorfer et al. teach pesticidal compositions can be formulated in various different ways including aqueous solutions, emulsions, sprayable solutions, microcapsules, etc. (see column 7 lines 20-30).

Scher et al. teach a process for the microencapsulation of substantially water-insoluble liquid material (core liquid) (see the abstract). The core liquid consists of one or more active (i.e. herbicide, insecticide, fungicide, insect repellent, etc.) dissolved in an inert solvent (see column 3 lines 15-36). The microcapsules have a shell or wall content ranging from about 1 to about 25% of the microcapsule, a droplet size diameter in the range of 0.5 to 4000 microns, and a microcapsule diameter ranges from 5 to 40 microns (see the abstract, column 9 lines 61-68, and the Examples). The microcapsules produced by this process are capable of a slow rate of release of the encapsulated liquid by diffusion through the shell into the surrounding environment (see column 2 lines 56-61).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

One of ordinary skill in the art would have been motivated to formulate the instant claimed components into microcapsules because it is known in the art that agrochemical formulations comprising actives and adjuvants can be formulated into a variety of ways including microcapsules, as suggested by Waltersdorfer et al. Further, it is known in the art that microencapsulating an organic liquid solution comprising an active and adjuvant will result in slow releasing agrochemical formulations for long term application.

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Thus, it would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to prepare the formulation taught by Mueninghoff et al. as microcapsules because it is an obvious variation of ways to prepare an agrochemical formulation, depending on the desired properties and release rate of the final product.

Furthermore, although Mueninghoff et al. do not teach the mean diameter of the microcapsule of less than 2 microns and a total wall polymer concentration of less than 3%, Scher et al. suggest that microcapsules can be prepared with the instantly claimed diameter and polymer concentration. Thus, it would have been obvious to one of ordinary skill in the art to prepare microcapsules with the instantly claimed diameter and polymer wall concentration because it is an obvious variation of diameter range and polymer wall concentration that can be used in the preparation of agricultural microcapsules.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the reference, especially in the absence of evidence to the contrary.

8. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mueninghoff et al. (US 6,156,705), in view of Waltersdorfer et al. (US 5,139,785) and Scher et al. (US 5,332,584), further in view of Roberts (US 5,580,567).

Applicant claims a microencapsulated agrochemical composition comprising an aqueous dispersion of microcapsules having material encapsulated therein wherein the material encapsulated within the microcapsules comprises (a) an agrochemical (b) a water-insoluble, bioperformance-enhancing adjuvant for said agrochemical wherein said adjuvant has little or no surfactant properties and (c) a water-immiscible solvent in which both the agrochemical and adjuvant are soluble.

Determination of the scope and content of the prior art
(MPEP 2141.01)

Mueninghoff et al. teach pesticidal formulations comprising pesticides (i.e. herbicides (e.g. alachlor), insecticides, fungicides (e.g. dithiocarbamate), insect repellants, etc.) and an adjuvant composition comprising a fatty alcohol polyalkoxy alkyl ether of formula (I) and a cosurfactant/solvent such as, ethoxylated fatty amines, methyl oleate, silicone surfactants, etc. (see the abstract and column 1 lines 60-67, column 2 lines 1-7, and columns 3-5 (lipophilic pesticide agents)). The pesticidal composition contains from 99 to 15 % by weight of the adjuvant and 0.1 to 95% of an active ingredient (see column 5 lines 44-52).

Waltersdorfer et al. teach pesticidal compositions can be formulated in various different ways including aqueous solutions, emulsions, sprayable solutions, microcapsules, etc. (see column 7 lines 20-30).

Scher et al. teach a process for the microencapsulation of substantially water-insoluble liquid material (core liquid) (see the abstract). The core liquid consists of one or more active (i.e. herbicide, insecticide, fungicide, insect repellent, etc.) dissolved in an inert solvent (see column 3 lines 15-36). The microcapsules have a shell or wall content ranging from about 1 to about 25% of the microcapsule, a droplet size diameter in the range of 0.5 to 4000 microns, and a microcapsule diameter ranges from 5 to 40 microns (see the abstract, column 9 lines 61-68, and the Examples). The microcapsules produced by this process are capable of a slow rate of release of the encapsulated liquid by diffusion through the shell into the surrounding environment (see column 2 lines 56-61).

**Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)**

Mueninghoff et al., Waltersdorfer et al., and Scher et al. do not teach the adjuvant having formula (II). This deficiency is cured by the teachings of Roberts.

Roberts teach a homogenous, essentially nonaqueous adjuvant composition to improve the chemical and physical properties of a pesticides, such as an herbicide, insecticide or fungicide comprising a spray oil, a blend of surfactants and a buffering agent that when combined with a pesticide, the composition becomes a more uniform

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spread of the spray solution of the herbicide or pesticide (see the entire article, especially the abstract, column 1 lines 11-17 and column 2 lines 58-64). The preferred surfactants include peg esters of the formula



where R=C₂-C₂₅ fatty alkyl, R'=C₂-C₂₅ fatty alkyl and m=1 to 100 (see the entire article, especially column 3 lines 34-41).

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

One of ordinary skill in the art would have been motivated to use the instantly claimed adjuvant of formula (II) because it is known in the art that the instantly claimed adjuvant of formula II can improve the physical and chemical properties of agrochemicals.

Thus, it would be obvious to one of ordinary skill in the art at the time the claimed invention was made to use an adjuvant having formula (II), because the instant adjuvants of formula I for the purpose of improving the properties of agrochemical formulations.

Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the reference, especially in the absence of evidence to the contrary.

Response to Arguments

Applicant's arguments with respect to claims 1 and 4-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. No claims are allowed.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie L. Brooks whose telephone number is (571) 272-9072. The examiner can normally be reached on M-F 8:30am-6:00pm Est..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616